

**REMARKS**

The Office Action of October 3, 2005, has been carefully reviewed, and in view of the above amendments and the following remarks, reconsideration and allowance of the pending claims are respectfully requested.

In the above Office Action, claims 1-3, 6, 15 and 21-29 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Turk et al.* (Figure 4, U.S. Patent No. 5,694,960); claims 16-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Mangiameli* (Figure 1, U.S. Patent No. 1,874,019); claims 4 and 7-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Turk et al.*; and claims 5 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Turk et al.* in view of *D'Antonio et al.* (U.S. Patent No. 6,123,093). For at least the following reasons, Applicant respectfully traverses these rejections.

The invention defined by independent claim 1 includes a heat sensitive sealing means that is designed to fail at high temperature. For example, with reference to the specific embodiment described in the specification, water within the glass bulb heats to its boiling point, and as it changes phase to steam it expands. The force of the expanding steam on the glass housing of the bulb causes the glass housing to shatter. Once the housing shatters, the region is desealed, causing depressurization of the region and movement of the valve. In addition, the valve can be activated by sensing a parameter such as smoke. The invention defined by claim 1 therefore relates to a combined mechanical and electrical means for detecting a fire and controlling a valve. It is important to note that if the power supply fails the valve assembly can still detect a fire and close the valve.

Figure 4 of *Turk* shows a fire detector 150, but it is clear from the drawing and column 4, lines 51-52, that the fire detector is electrically powered and operated.

*Turk* does not disclose a heat sensitive sealing means (such as a liquid filled glass bulb), a first fluid region, a second fluid region, a valve between first and second fluid regions, or a biasing means (such as a spring).

Thus, Applicant respectfully submits the invention defined by claims 1 and 21, and the claims dependent on claims 1 and 21 are patentable over *Turk*.

Independent claim 7 has been rejected as unpatentable in light of *Turk* and the teaching of *Waldbeser*.

As mentioned above, *Turk* does not disclose a heat sensitive sealing means (such as a liquid filled glass bulb), a first fluid region, a second fluid region, a valve between first and second fluid regions, or a biasing means (such as a spring).

The secondary reference upon which the Examiner relies, *Waldbeser*, discloses a truck having a valve which is electrically powered and radio controlled by the truck driver who stands in the vicinity of the truck. *Waldbeser* does not disclose a heat sensitive sealing means (such as a liquid filled glass bulb), a first fluid region, a second fluid region, a valve between first and second fluid regions, or a biasing means (such as a spring).

A person skilled in the art of controlling valves on fixed pipe installations such as the isolated gas mains shown in Figure 14 of the present application would not look to the field of trucks for a solution to the problem of improving control of valves on fixed pipe installations. One reason a person skilled in the art would not look in the field of trucks is because truck valves tend to be operated by a driver. Also, while it is economically viable for one truck to store/integrate a great deal of

hardware, in contrast, a plurality of isolated valves arranged along the length of a pipeline require a self-standing and cost-efficient solution. Moreover, the required range of radio operation is different. Valves on isolated gas mains desire operation when the user is away from the site whereas the truck driver works close to the truck. It is therefore clear that, in the absence of hindsight knowledge, a person skilled in the art of controlling valves on fixed pipe installations would not combine the system disclosed in *Turk* with the system disclosed in *Waldbeser*. Moreover, the operated-on-site-by-a-user system of *Waldbeser* is incompatible with the wholly autonomous system disclosed in *Turk*. Accordingly, Applicant submits claim 7 is new and inventive over *Turk* and *Waldbeser* and the rejection thereover must be withdrawn.

At paragraph 8 of the office action, the Examiner rejects claim 14 as being unpatentable over *Turk* in view of *D'Antonio*. As mentioned above, *Turk* does not disclose a heat sensitive sealing means (such as a liquid filled glass bulb), a first fluid region, a second fluid region, a valve between first and second fluid regions, or a biasing means (such as a spring). *D'Antonio* discloses another purely electronic system for controlling fluid flow. Even in the unlikely event that the teaching of these documents would be combined by a person skilled in the art, the person would not arrive at the combination of features claimed in claim 14. As such, Applicant submits that the rejection of claim 14 must be withdrawn.

The remaining claims depend either directly or indirectly from the above-discussed independent claims and are patentable based at least upon there dependence from the independent claim.

**CONCLUSION**

In view of the above amendments and remarks, Applicant respectfully submits that the claims of the present application are now in condition for allowance, and an early indication of the same is earnestly solicited.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference would be helpful in resolving any remaining issues pertaining to this application; the Examiner is kindly invited to call the undersigned counsel for Applicant regarding the same.

Respectfully submitted,

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